



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/713,422      | 11/17/2003  | Rainer Lorenz        |                     | 2743             |

7590 04/05/2004

Jones Tullar & Cooper PC  
P.O. Box 2266 Eads Station  
Arlington, VA 22202

|          |
|----------|
| EXAMINER |
|----------|

EDMONDSON, LYNNE RENEE

|          |              |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

1725

DATE MAILED: 04/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/713,422

Applicant(s)

LORENZ, RAINER

Examiner

Lynne Edmondson

Art Unit

1725

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 17 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 11/17/03.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Double Patenting*

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1-12 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 and 19-30 of U.S. Patent No. 6698644 B2. The '644 patent teaches the instant invention essentially as claimed. Both are drawn to a Coriolis structure formed by brazing of titanium to stainless steel under compressive stress with the use of a Ag-Cu-Pd brazing alloy. This alloy is known in the art as Pacusil. However, the phrasing and terminology of the instant claims is slightly different and the '644 claims teach unplated surfaces where the instant claims are silent about plating.

It would have been obvious to one of ordinary skill in the art at the time of the invention that the structures are identical whether the surface is plated or unplated and the joints are identical as both exert compressive stress on the first component.

Art Unit: 1725

3. Claims 13-20 rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. 6352196 B1. The '196 patent teaches the instant invention essentially as claimed. Both are drawn to brazing of titanium to stainless steel under compressive stress with the use of a Ag-Cu-Pd brazing alloy. This alloy is known in the art as Pacusil. However, the phrasing and terminology of the instant claims is slightly different.

It would have been obvious to one of ordinary skill in the art at the time of the invention that the methods would result in formation of an identical structure.

4. Claims 13-20 rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 12 and 16-20 of U.S. Patent No. 6168069 B1. The '069 patent teaches the instant invention essentially as claimed. Both are drawn to brazing of titanium to stainless steel under compressive stress with the use of a Ag-Cu-Pd brazing alloy. This alloy is known in the art as Pacusil. However, the phrasing and terminology of the instant claims is slightly different.

It would have been obvious to one of ordinary skill in the art at the time of the invention that the methods would result in formation of an identical structure.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 1-6 and 13-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Matsui et al. (USPN 4538562).

Matsui teaches an arrangement comprising titanium or stainless steel component (col 3 lines 43-54) joined to metal by brazing under compression (col 3 line 55 – col 4 line 15). The brazing alloy comprises Ag and Cu (col 7 lines 3-16).

2. Claims 1-8 and 13-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Welch et al. (USPN 3956098).

Welch teaches an arrangement comprising titanium (col 1 lines 39-47) or stainless steel component (col 5 lines 33-36) joined to metal by brazing (soldering) under compression (col 3 lines 15-33 and col 5 line 63 – col 6 line 13) wherein the steel or titanium member is surrounded by the other metal (col 5 lines 27-36). The brazing alloy comprises Ag, Cu and Pd (col 2 lines 43-53). See Welch claim 1.

Art Unit: 1725

3. Claims 1-4 and 9-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Hussain et al. (USPN 5476013).

Hussain teaches a Coriolis mass flow meter (col 2 lines 52-64) comprising a titanium or stainless steel components (col 3 lines 25-35) joined to metal by brazing (soldering) under compression (col 3 lines 1-16) wherein one member is enclosed by the other member (7 steel around 1 Ti or 6 pipe around 7 steel) (figure 1 and col 3 lines 36-52). A tube (11) is surrounded by and soldered to flange (10) (figure 2 and col 3 lines 56-64).

4. Claims 1-4 and 13-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Mori et al. (USPN 5687995).

Mori teaches an arrangement comprising titanium and stainless steel components joined by brazing under compression (col 7 line 50 – col 8 line 4 and col 9 lines 18-27 and figure 4).

5. Claims 1-4 and 13-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Wei (USPN 5803553).

Wei teaches an arrangement comprising titanium and stainless steel components (col 4 lines 35-51) joined by brazing (col 9 line 59 – col 10 line 8) under compression (col 3 line 52 – col 4 line 4).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-8 and 13-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lynnworth (USPN 5159838) in view of Kluczynski (USPN 5256496).

Lynnworth teaches a mass flow meter having high strength, good vibration properties and high corrosion resistance (Lynnworth, col 7 lines 44-46 and col 8 lines 20-27) having the claimed configuration (figures 2-4). A titanium component (plug, 63) is joined to a titanium tube (61) inside a stainless steel pipe (64) and sleeve (col 13 lines 28-50). Note that the sleeve is placed over the tube which is inserted into a bore in the component (see figure 6). Also in figure 6 between reference #64 and #63 there is a collar (flange) which stops the advancement of the sleeve (67). Joining is achieved by welding among other attachments (col 13 lines 28-50) including compression fittings, threads, and brazing (col 19 lines 20-22). As no plating is disclosed in the description of the components in the device, it is presumed that they were unplated. However, Lynnworth does not teach a brazing composition.

Kluczynski teaches a brazing alloy with Ag, Cu and Pd for joining stainless steel and titanium (col 1 lines 66-col 2 line 2) to avoid oxidation of titanium (col 1 lines 29-35, col 3 lines 49-50) and form a joint with good strength and corrosion resistance (Kluczynski, col 1 lines 33-39).

It would have been obvious to one skilled in the art at the time of the invention to use a Ag-Cu-Pd alloy to join the titanium and stainless steel of the Lynnworth to achieve desirable acoustic properties as well as structural rigidity (Lynnworth, col 7 lines 44-46 and col 4 lines 4-31). The combination of compression threads and brazing would make a strong joint to adapt the device for with the ability to withstand high pressures and resist corrosion (Lynnworth, col 8 lines 20-27).

### ***Conclusion***

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lynne Edmondson whose telephone number is (571) 272-1172. The examiner can normally be reached on Monday through Thursday from 6:30 a.m. to 5 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Dunn can be reached on (571) 272-1171. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.



Art Unit: 1725

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Lynne Edmondson  
Primary Examiner  
Art Unit 1725

A handwritten signature in black ink, appearing to read 'Lynne Edmondson', followed by a horizontal line and the date '3/27/04'.

LRE